

Rappahannock Astronomy Club

Minutes, June 18, 2014, Meeting

In attendance:

- Terry Barker
- Bart & Linda Billard
- Don Clark
- Ron Henke
- Glenn Holliday
- Scott Lansdale
- Dan Lien
- Brian Sirnack
- Lisa Manion*

*New member joined at meeting

Acting Vice President Glenn Holliday called the meeting to order shortly after introductions at 7 p.m. Ten members, including a visitor who joined the club during the meeting, were present.

Program

Terry Barker presented “Dragon Eats Saturn and Orion.” He explained the title referred to the Dragon robotic spacecraft made by SpaceX, and Saturn and Orion to the NASA Moon rocket and the proposed next NASA vehicle project that is now shelved. Dragon is an example of a privately developed space/engineering capability inspired by a prize competition such as the Ansari X Prize, and Terry’s presentation theme was the potential of such competitions to spur new developments in science and technology. He had an interesting presentation arrangement using the PowerPoint alternative, Prezi (<http://prezi.com/>), in which everything was on one slide: an image of the Dragon capsule in orbit. Each new topic was revealed as a small marking somewhere on the capsule: the slide would pan and zoom in on the spot and reveal a slide within the slide.

Terry used a series of trivia questions and passed out a Milky Way (bar) to reward right answers. The first question revealed Al Gore first proposed a satellite that would orbit between Earth and the Sun and was designed to monitor both. Terry said the project was started but subsequently scrubbed, and that it has been revived recently with a launch scheduled for 2016. He had four more questions with a common answer. Elon Musk was one of the founders of PayPal, is the head of both Tesla and SpaceX, and was an X Prize board member. Currently, only Russia and the United States can get to the International Space Station (ISS), and Russia is the only country with a capability to transport humans. The United States is only capable of reaching ISS via SpaceX Dragon, a commercial cargo vehicle. SpaceX just announced Dragon version 2 is scheduled to fly in 2016. SpaceX is also building another rocket called Falcon Heavy, which is to be the most powerful rocket ever built. The current rocket is Falcon, which can be recycled.

Terry also went online to show some interesting pictures and websites he has found recently. He included a slide show from the recent Science Expo at the DC Convention Center. He and Don Clarke were there and were amazed by the size of the exposition. They were able to see an actual Enigma machine. Terry showed us a website ([Super Planet Crash](#)) where you can play a game with simulated planetary systems by adding your choice of planet types at different orbital distances. You can then see whether the configuration is unstable, causing a collision or a planet to be thrown out of orbit. Another web page Terry showed us was a news item about a technical competition held in Israel on the date of the club meeting. Technion was holding a “space elevator” competition, with Yuri Artsutanov as guest of honor and serving as one of the judges. Contestants were challenged to build a device capable of climbing 25 meters up a steep cable. Artsutanov is noted for proposing a method of making a space elevator by lowering a cable from geosynchronous orbit while extending a counterweight outward to maintain the center of mass at the geosynchronous platform. Technion later reported the winners based their vehicle on the workings of an electric screwdriver.

Old Business

- Treasurer’s Report—Tim Plunkett had no changes to report for May.

- Star Parties, Events, and Meetings—The Caledon event for May 31 was successful. Glenn said the sky was clear, and the seeing was alternately good and bad. Four new families came out and all brought telescopes. One NOVAC member came from Silver Spring, MD. Around the time everyone was leaving, a group came looking for a fishing event. Apparently they were confused. Glenn later learned from Sammy there was one at Westmoreland State Park.

Astronomy Night at the National Mall was very successful. Linda Billard reported six club members participated with four telescopes, and two other pairs of members stopped by to see what it was like. All four telescopes were in constant use showing the Moon, Saturn, and some other objects from time to time.

Glenn reported feedback from Renaissance Faire volunteers that people were asking after “the astronomers” the next day. He and Bart Billard were volunteers and talked about the beginnings of modern astronomy in early Elizabethan England. Glenn led some groups in acting out a demonstration of the difference between the heliocentric Copernican system and the older picture with the Earth at the center.

Coming events included the next Caledon star party June 28 and a possible return to Northumberland in November. Glenn said he had not heard from Northumberland Preservation yet and was considering sending them an email. He asked whether members were interested in supporting it. Glenn also brought up the possibility of holding an outreach event for the next transit of Mercury, which is about 2 years from now. It will be during the day on a Monday.

- Communications Committee Report—Glenn said he was still deleting spam. One got past the filter but did not end up on the website because an administrator has to approve it first. Glenn was able to spot it and delete it. He said he had received a message about vulnerability in WordPress that will require an update to correct. However, it may only apply to websites hosted by WordPress and not to ours.

News/New Business/Announcements

- The club picnic date is August 23. Glenn said Scott Busby was still looking for someone to organize some entertainment.
- Scott Busby is scheduled to give the July meeting program.

Next Meeting

The next meeting is on Wednesday, July 16, 2014, at the Heritage Center in Fredericksburg.